NOTE: Page numbers for previous revisions may differ from page numbers in the current version.

Revision 1.0: Released to Market
Revision 1.3: Update Iq in page1 and correct TYP in EC table
Revision 1.4: Update PACKAGE INFORMATION (SOT563)
Revision 1.5: Update DEVICE ORDER INFORMATION
Revision 1.6: Update ABS T_J max and add MSL information

SCT2220TVAR	Tape & Reel	5000	2220	6.52 re		

 © 2025 Silicon Content Technology Co., Ltd. All Rights Reserved

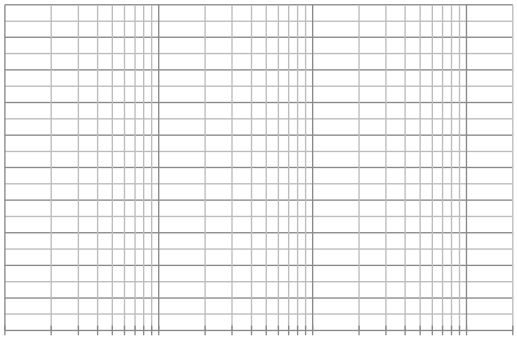
© 2025 Silicon Content Technology Co., Ltd. All Rights Reserved

V_{IN}=12V, T_J=-40℃~125℃, typical values are tested under 25℃.

V_{IN}	Operating input voltage		4.2		17	V
V_{IN_UVLO}	Input UVLO Hysteresis	V_{IN} rising		3.9 300	4.15	V mV
I_{SD}	Shutdown current	EN=0, No load, VIN=12V		1.5	5	uA
I_Q	Quiescent current	EN=2V, No load, No switching. VIN=12V. BST-SW=5V		135		uA

en-US

 © 2025 Silicon Content Technology Co., Ltd. All Rights Reserved



© 2025 Silicon Content Technology Co., Ltd. All Rights Reserved

 © 2025 Silicon Content Technology Co., Ltd. All Rights Reserved

The SCT2220 4device is 4.2-17V

© 2025 Silicon Content Technology Co., Ltd. All Rights Reserved

 © 2025 Silicon Content Technology Co., Ltd. All Rights Reserved

In each switching cycle, the inductor current is sensed by monitoring the low-side MOSFET during the OFF period. When the voltage between GND pin and SW pin is lower than the over current threshold voltage, the OCP will be triggered and the controller keeps the OFF state. A new switching cycle will begin only when the measured voltage is higher than limit voltage. If output loading continues to increase, output will dropped below the UVP, and SS pin is discharged such that output is 0V. Then the device will count for 7 cycles of soft-start time for hiccup waiting time and restart normally after 7 cycles' soft-start period.

© 2025 Silicon Content Technology Co., Ltd. All Rights Reserved

The SCT2220 features external programmable output voltage by using a resistor divider network R1 and R2 as shown in the typical application circuit Figure 8. Use equation (8) to calculate the resistor divider values.

$$_{1} = \frac{(\quad - \quad) \times \quad _{2}}{} \qquad (8)$$

1.2	4.99	10	2.2	10	2 x 22	100
1.5	8.66	10	2.2	10	2 x 22	100
1.8	12.4	10	3.3	10	2 x 22	100
2.5	21.5	10	3.3	10	2 x 22	100
3.3	31.6	10	3.3	10	2 x 22	100
5.0	52.3	10	4.7	10	2 x 22	100

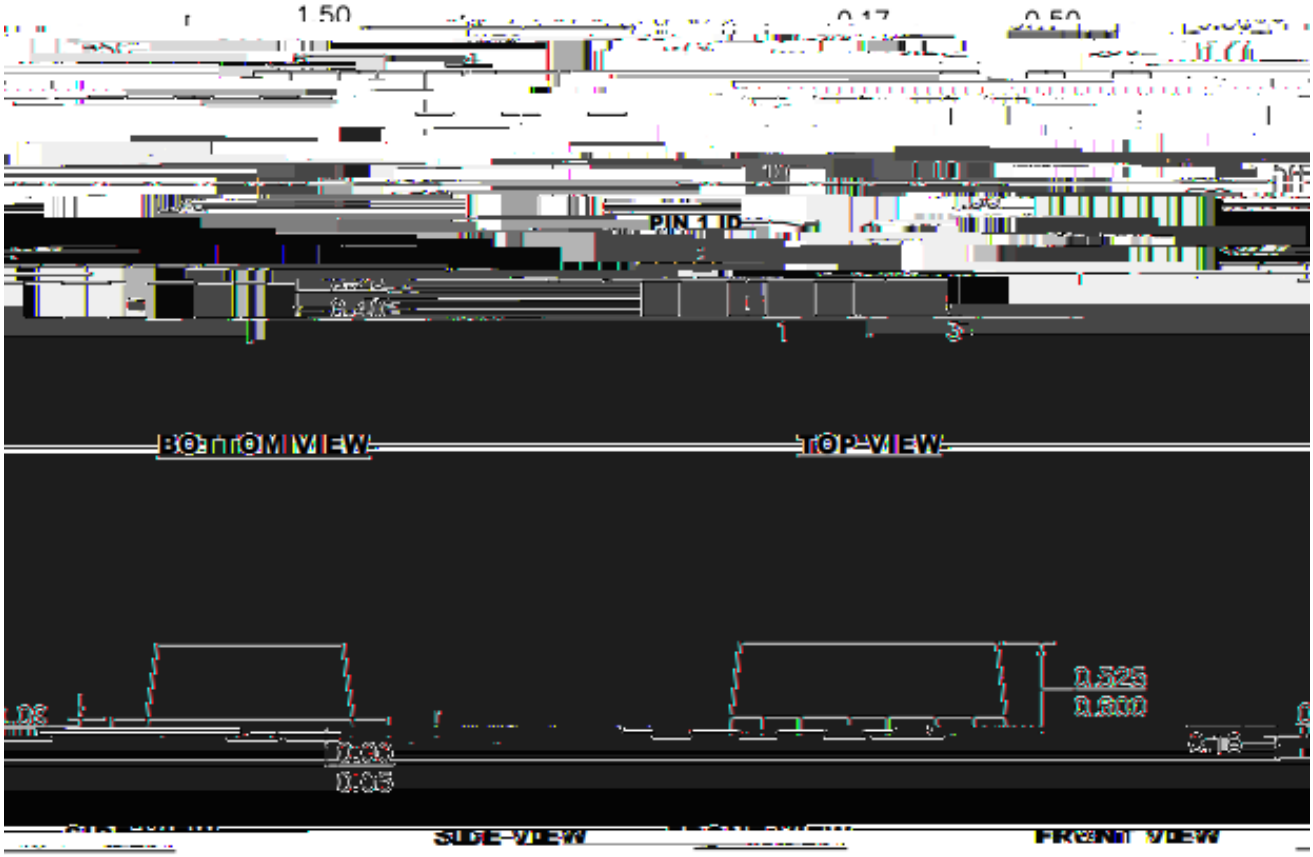
 © 2025 Silicon Content Technology Co., Ltd. All Rights Reserved

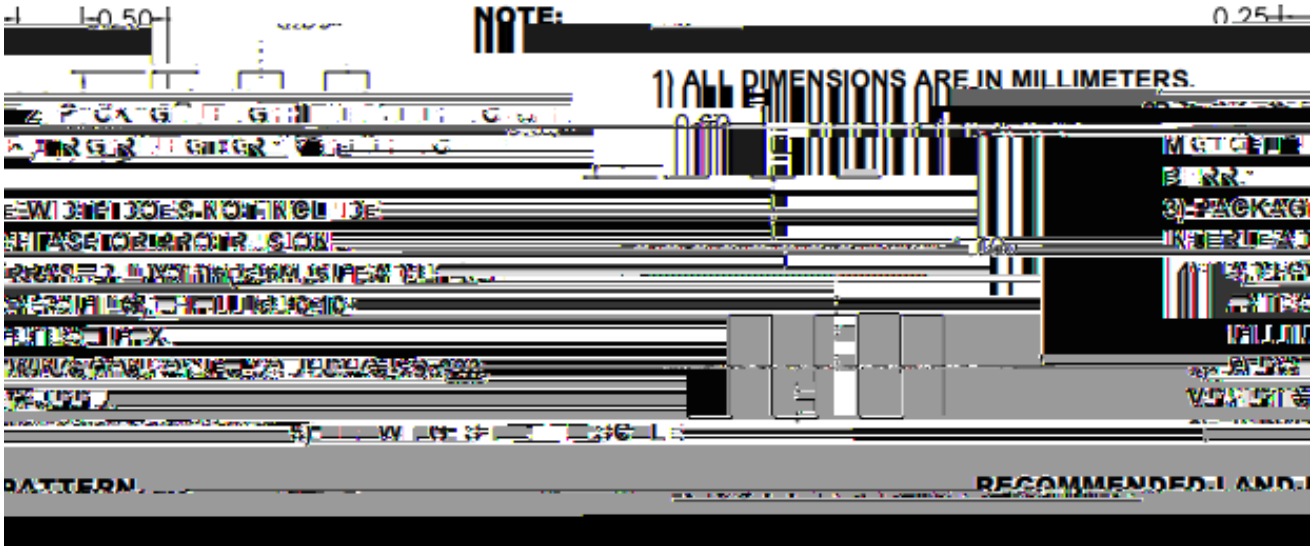
© 2025 Silicon Content Technology Co., Ltd. All Rights Reserved

The regulator could suffer from instability and noise problems without carefully layout of PCB. Radiation of high-

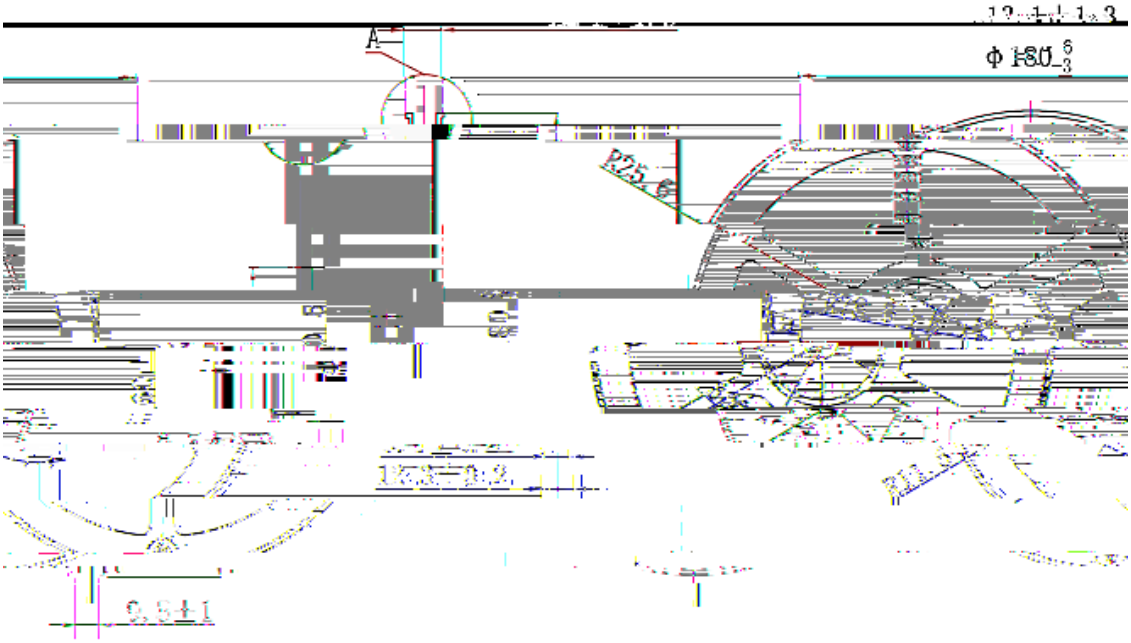
 © 2025 Silicon Content Technology Co., Ltd. All Rights Reserved

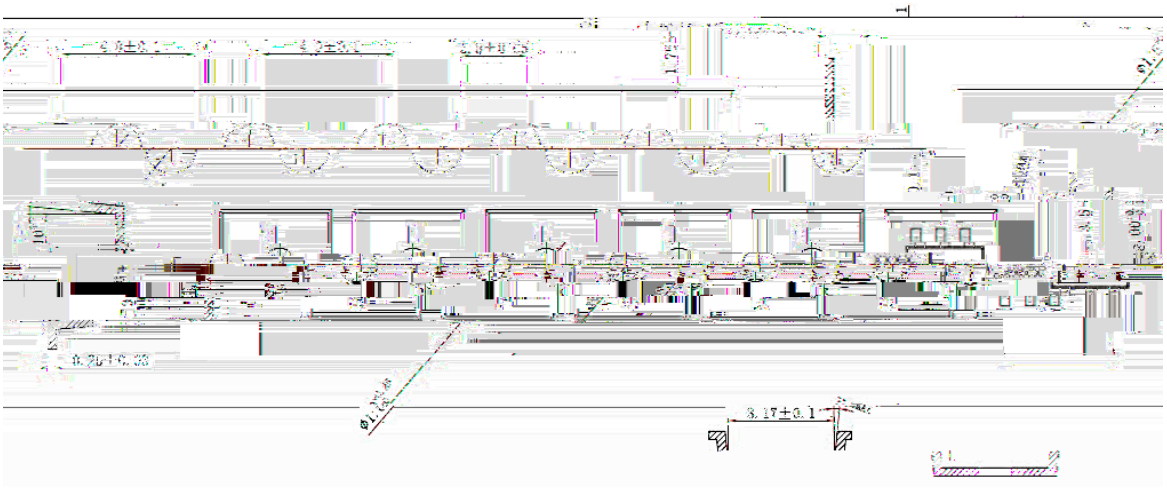
© 2025 Silicon Content Technology Co., Ltd. All Rights Reserved

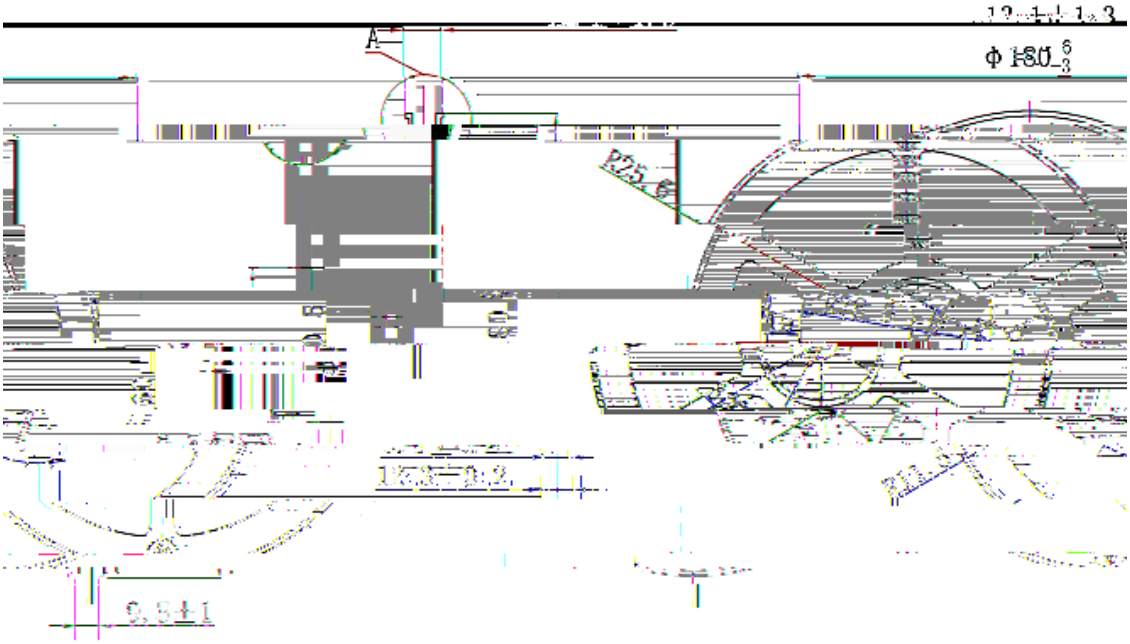


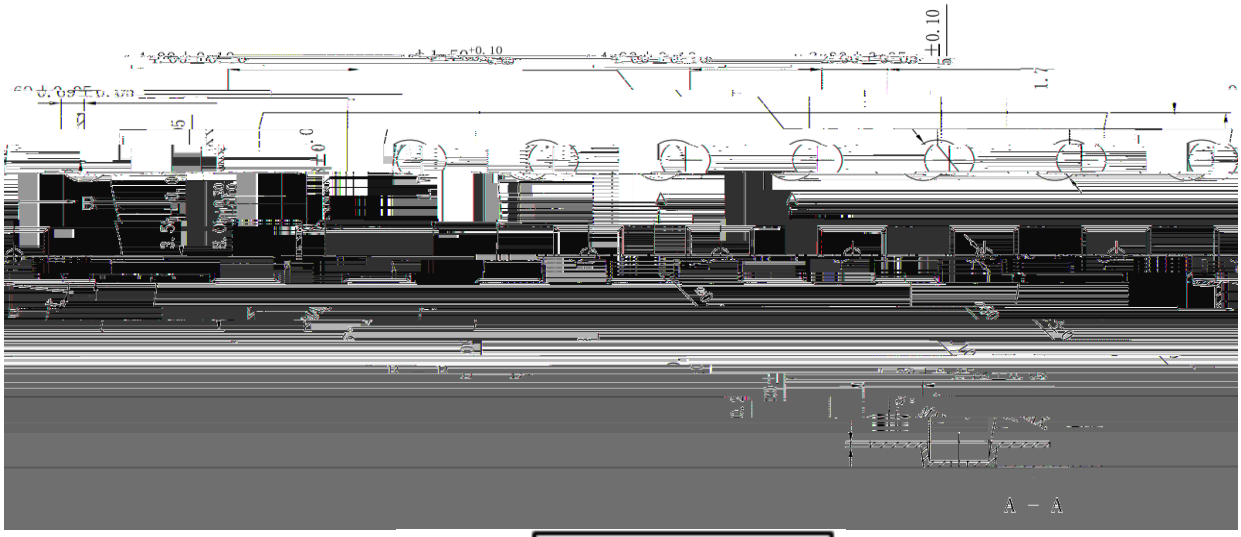


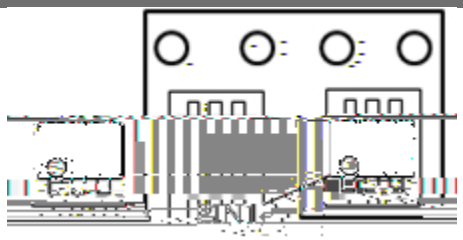
 © 2025 Silicon Content Technology Co., Ltd. All Rights Reserved











 © 2025 Silicon Content Technology Co., Ltd. All Rights Reserved